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Claims

1. A method for measurement of optical rsp. electrical signal sequences (S) in an optical or electrical transmission system wherein a multitude of consecutive signals is sampled periodically at a sampling time (T_1) with at least one adjustable threshold value (SW), wherein the probability (W_1) that the value of the signal sequence (S) at a sampling time (T_1) is above or below each threshold value (SW_1) is measured, after a given period of time (t_s) the threshold value (SW_1) is changed and the probability (W_2) that a value of the signal sequence (S) at a sampling time (T_1) is above or below a new threshold value (SW_2) is measured and the probability (W_1) of the preceding threshold value (SW_1) is subtracted from the probability (W_2) of the current threshold value (SW_2).

2. The method of claim 1, wherein the sampling time (T_x) at which the consecutive signals are sampled with an adjustable threshold value (SW) is modified after a fixed or adjustable period of time (t_p).

3. The method of claim 2, wherein first all probabilities $(W_1, W_2, W_3 ...)$ of all threshold values $(SW_1, SW_2, SW_3 ...)$ are measured successively at a first sampling time (T_x), then the sampling time (T_x) is changed, and then for the new sampling time $(T_x\cdot)$ again all probabilities $(W_1, W_2, W_3 ...)$ of all threshold values $(SW_1, SW_2, SW_3 ...)$ are measured successively.

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4. The method of claim 2, wherein first the probabilities (W_1) of the threshold value (SW_1) are measured successively for all sampling times (T_1, T_2, T_3 ...), then the threshold value (SW_1) is changed, and then for the new threshold value (SW_2) again the probabilities (W_2) for all sampling times (T_1, T_2, T_3 ...) are measured successively.

5. The method of the claim 1, wherein for measurement of the probabilities (W_1, W_2, W_3 ...) the signals are fed to a threshold decision circuit, the results of the threshold decision circuit are counted in an event counter, and the results of the event counter is fed to a storage device.

6. The method of claim 1, wherein the first threshold value (SW_1) is set to a value above the highest expected value of the signal sequence (S).

7. The method of claim 6, wherein the threshold value (SW_2 SW_3, SW_4 ...) is reduced after each period of time (t_s) until the threshold value (SW_m) is set to a value below the lowest expected value of the signal sequence.

8. The method of claim 1, wherein the first threshold value (SW_1) is set to a value below the lowest expected value of the signal sequence (S).

9. The method of claim 8, wherein the threshold value (SW_2 SW_3, SW_4 ...) is increased after each period of time (t_s) until the threshold value (SW_m) is set to a

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value above the highest value of the signal sequence
(S).

10.An eye diagram monitor for generation of an eye
diagram of signal sequence (S) with at least one
threshold decision circuit (3), with at least one
storage device (5), and with an analysis device (5),
particularly for the execution of the method of
claim 1, wherein at least one counter (6) is
provided, the signal sequence (S) is fed to an input
(7) of the threshold decision circuit (3), and the
output (8) of the threshold decision circuit (3) is
connected to the input (9) of the counter (6).

11.The eye diagram monitor of claim 10, wherein an
adder (10) is provided by which a DC voltage (O) is
added to the signal sequence (S) and the sum of
signal sequence (S) and DC voltage (O) is fed to the
input (7) of the threshold decision circuit (3).

12.The eye diagram monitor of claim 11, wherein for the
adder (10) a current-driven emitter-follower with a
series resistor or a current mirror is used.

13.The eye diagram monitor of claim 10, wherein the
threshold decision circuit (3) and / or the counter
(6) is realized by a flip-flop.

14.The eye diagram monitor of claim 10, wherein the
threshold decision circuit (3) is connected with an
adjustable phase shifter (12).